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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/667,905	11/02/2012	Shuang Xu	NVIDP705/SZ100203CN1US1	4538

75359 7590 02/03/2017

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EXAMINER
PATEL, JITESH

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
02/03/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHUANG XU

Appeal 2016-005468
Application 13/667,905[1]
Technology Center 2600

Before STEPHEN C. SIU, ELENI MANTIS MERCADER, and SCOTT B. HOWARD, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Final Rejection of claims 1, 3–10, and 12–18, which constitute all of the claims pending in this application. Claims 2 and 11 have been cancelled. Final Act. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellant identifies NVIDIA Corporation as the real party in interest. App. Br. 3.

THE INVENTION

The disclosed and claimed invention is directed to a 3D display system and 3D displaying method. Spec., ¶ 2.

Claim 1, reproduced below with the disputed limitation emphasized, is illustrative of the claimed subject matter:

> 1. A system, comprising:
> a display device;
> a detecting device configured to detect a viewing position of a viewer, wherein the detecting device comprises a detecting signal transmitter disposed on three-dimensional (3D) glasses and a detecting signal receiver that receives a signal from the detecting signal transmitter to determine the viewing position; and
> a control device configured to:
> *convert a video frame onto a virtual plane perpendicular to a visual line of the viewing position*,
> map the converted video frame onto a display plane of the display device to generate a 3D image for display; and
> cause the 3D image to be displayed on the display device.

REFERENCES

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Maxson et al.	US 2010/0053310 A1	Mar. 4, 2010
Son et al.	US 2010/0201790 A1	Aug. 12, 2010
Cheng	US 2011/0316847 A1	Dec. 29, 2011
Abelow	US 2012/0069131 A1	Mar. 22, 2012

REJECTIONS

Claims 1 and 10 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Son in view of Maxson. Final Act. 3–6.

Claims 3–5 and 12–14 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Son in view of Maxson and Cheng. Final Act. 6–9.

Claims 6–9 and 15–18 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Son in view of Maxson, Cheng, and Abelow. Final Act. 9–12.

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellant's arguments that the Examiner erred. In reaching this decision, we have considered all evidence presented and all arguments made by Appellant. We disagree with Appellant's arguments with respect to the pending claims, and we incorporate herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken (Final Act. 3–12), (2) the findings and reasons set forth by the Examiner in the Advisory Action (Adv. Act. 2), and (3) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellant's arguments (Ans. 2–10). We incorporate such findings, reasons, and rebuttals herein by reference unless otherwise noted.[2] However, we highlight and address specific findings and arguments for emphasis as follows.

Appellant argues the Examiner erred in finding the cited prior art teaches or suggests "convert[ing] a video frame onto a virtual plane

[2] Rather than reiterate the entirety of the arguments of Appellant and the positions of the Examiner, we refer to the Appeal Brief (filed Nov. 18, 2015); the Reply Brief (filed May 2, 2016); the Final Office Action (mailed May 18, 2015); the Advisory Action (mailed Sept. 10, 2015); and the Examiner's Answer (mailed Mar. 2, 2016) for the respective details.

perpendicular to a visual line of the viewing position," as recited in claim 1. App. Br. 10–14; Reply Br. 6. According to Appellant, the prior art, unlike the claimed invention, will not result in a video frame that "will appear the same to ***all viewers*** regardless of viewing position." App. Br. 11 (emphasis added); *see also* App. Br. 12 ("In other words, ***the claimed limitations cause the video frame to appear the same to all viewers*** regardless of viewing position by distorting the video frame such that, when viewed at an angle to the display device, the video frame appears undistorted.") (emphasis added).

The Examiner concludes the claims do not recite what Appellant argues. Ans. 4–9. Instead, the Examiner concludes the claim "merely recite[s] detecting a viewing position of a (single) viewer and converting a (single) video frame onto a virtual plane perpendicular to a visual line of the detected viewing position of the (single) viewer." Ans. 5 (emphasis omitted); *see also* Ans. 8 ("The above cited limitations in claim 1 merely recite detecting a viewing position of a (single) viewer and converting a (single) video frame onto a virtual plane perpendicular to a visual line of the detected viewing position of the (single) viewer." (emphasis omitted)).

In the Reply Brief, Appellant concedes that "[t]he Examiner is correct that the claims do not explicitly include these limitations, but this description was merely provided to illustrate the difference between converting a video frame and generating a new image based on new rendering parameters (e.g., virtual camera positions) as taught by Son." Reply Br. 6 (emphasis omitted).

During prosecution, claims must be given their broadest reasonable interpretation while reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard,

we interpret claim terms using "the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

Based on the ordinary meaning of the words of the claims—including Appellant's concession in the Reply Brief—we agree with the Examiner that the claims do not require the video frame to appear the same to all viewers regardless of viewing position. Because Appellant's arguments are not commensurate with the scope of the claims, they are unpersuasive. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

In the Reply Brief, Appellant argues for the first time that Son does not teach or suggest the claim limitation "convert a video frame." Reply Br. 5–6. Appellant's new argument focuses on whether Son converts an image or generates a new image. *Id.* That is distinct from the argument presented in the Appeal Brief, which focused on whether a converted video image was converted "onto a virtual plane perpendicular to a visual line of the viewing position" so that it could be viewed by all viewers. *Compare* Reply Br. 5–6 (focusing on the term convert), *with* App. Br. 10–12 (focusing on whether "the video frame will appear the same to all viewers regardless of viewing position"). Because Appellant's argument was presented for the first time in the reply brief and good cause has not been shown why it was not argued earlier, it has been waived. *See* 37 C.F.R. §41.41(b)(2); *see also Optivus Technology, Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (issue waived for the first time in a reply brief is waived).

Accordingly, we sustain the Examiner's rejection of claim 1, along with the rejection of claim 10, which is argued on the same grounds. *See* App. Br. 13–14.

With respect to dependent claims 3–9 and 12–18, Appellant merely contends that because the additional references used in the rejections of these claims (Chang and Abelow) do not cure the shortcomings of the other references applied against claim 1, the Examiner failed to make a prima facie case of obviousness for these claims. App. Br. 14. Because we determine that the rejection of claim 1 is not erroneous for the reasons discussed above, we sustain the rejections of these claims.

DECISION

For the above reasons, we affirm the Examiner's decisions rejecting claims 1, 3–10, and 12–18.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED